

Appln. No. 09/697,389
Amdt. Dated February 9, 2004
Reply of Office Action of November 7, 2003

REMARKS

Reconsideration of the present application, as amended, is respectfully requested.

The November 7, 2003 Office Action and the Examiner's comments have been carefully considered. In response, the Specification, drawings and claims are amended, and remarks are set forth below in a sincere effort to place the present application in form for allowance. The amendments are supported by the application as originally filed. Therefore, no new matter is added.

CLAIMS

The claims are amended to correct informalities. The amendments are not related to the patentability of the claims.

SPECIFICATION

In the Office Action the disclosure is objected to because of certain informalities. In response, the disclosure is amended in an effort to comply with the Examiner's request. In view of the amendment of the disclosure, reconsideration and withdrawal of the objection thereto are respectfully requested.

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DRAWINGS

In the Office Action the drawings are objected to because the Examiner contends that Figs. 4A and 4B do not contain descriptive labels. In response, Figs. 4A and 4B of the drawings are amended as requested by the Examiner. Submitted herewith is an annotated sheet showing changes for Figs. 4A and 4B and a new formal drawing for Figs. 4A and 4B. In view of the amendment of Figs. 4A and 4B, reconsideration and withdrawal of the objection to the drawings are respectfully requested.

REJECTION UNDER 35 USC 112

In the Office Action claims 4-7 and 12 are rejected under the second paragraph of 35 USC 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In response, claim 4 is amended to ensure that there is proper antecedent basis for each term used in the claims. In view of the amendment of claim 4, reconsideration and withdrawal of the rejection of claims 4-7 and 12 are respectfully requested.

ALLOWABLE SUBJECT MATTER

The Examiner's indication that claims 5-7 and 12 would be

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allowable if rewritten to overcome the rejection under the second paragraph of 35 USC 112 and to include all of the limitations of the base claim and any intervening claims is acknowledged and appreciated. In response, claims 5-7 and 12 are not amended in independent form in view of the asserted allowability of claim 1, upon which claims 5-7 and 12 ultimately depend. If the Examiner ultimately determines that claim 1 is not allowable over the prior art of record, Applicant may amend the allowed claims to be in independent form.

DOUBLE PATENTING

In the Office Action, claims 1-4 and 8-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 4, 9 and 10 of USP 6,574,300 (Florent et al.) in view of USP 5,289,373 (Zarge et al.). In response Applicants respectfully state that independent claim 1 is patentable over Florent et al. in view of Zarge et al.

Claim 1 is directed to an image processing method including the steps of extracting threadlike structure points, forming strings from the extracted threadlike structure points, temporally filtering the data of the points located outside the strings denoted background points, spatially filtering the data

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of the string points, and constructing the filtered second image data by performing an insertion of the spatially filtered data of the string points into the temporally filtered data of the background points.

In rejecting claims 1-4 and 8-11, the Examiner contends that the step of constructing the filtered second image data by performing an insertion of the spatially filtered data of the string points into the temporally filtered data of the background points corresponds to the "step of pixel value selection based on said binary mask image pixel values for producing respectively, as a finally filtered pixel value" recited in claim 1 of Florent et al. In Florent et al. determining whether a finally filtered pixel value is a temporally filtered pixel value or a spatially filtered pixel value is selected as a pixel value is based on a binary mask image pixel value. In contrast, claim 1 recites that a filtered second image is constructed by inserting the spatially filtered data of string points into the temporally filtered data of the background points. Claim 1 of Florent et al. does not recite inserting spatially filtered data of string points into the temporally filtered data of background points to construct a filtered second image. Moreover, Florent et al. claim producing spatially and temporally filtered pixel values of the second

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original image. In contrast, claim 1 of the present application recites, performing in each sequence image, temporally filtering the data points located outside the strings' denoted background points and spatially filtering the data of the string points. Claim 1 of the present application does not limit the production of spatially and temporally filtered pixel values to the second original image as recited in claim 1 of Florent et al. Zarge et al. do not close the gap between claim 1 of the present application and claim 1 of Florent et al. Therefore claim 1 is patentable even in view of claim 1 of Florent et al. and Zarge et al.

Claims 2-4 and 8-11 are patentable over claim 1 of Florent et al. and Zarge et al. for reasons, inter alia, set forth above in connection with claim 1.

Claims 3, 4, 9 and 10 of Florent et al. when taken in combination with Zarge et al. do not render claims 1-4 and 8-9 unpatentable under the judicially created doctrine of obviousness-type double patenting for reasons, inter alia, set forth above in connection with claim 1.

In view of the foregoing, claims 1-4 and 8-11 are patentable over claims 1-4 and 8-11 of Florent et al. even when taken in combination with Zarge et al.

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In view of the foregoing, reconsideration and withdrawal of the rejection of claims 1-4 and 8-11 under the judicially created doctrine of obviousness-type double patenting are respectfully requested.

REJECTION UNDER 35 USC 103

In the Office Action, claims 1-3 and 8-11 are rejected under 35 USC 103 as being unpatentable over the article by Aufrichtig et al. in view Zarge et al.

In response, Applicants respectfully state that claims 1-3 and 8-11 are patentable over these references for reasons, inter alia, set forth below.

In rejecting claim 1 the Examiner contends that the step of constructing the filtered second image data by performing an insertion of the spatially filtered data of the string points into the temporally filtered data of the background points is taught in Fig. 1 of Aufrichtig et al. Fig. 1 of Aufrichtig et al. teaches that both spatial filtering and temporal filtering occur and that LUT adjustment of filter weights are assigned to the spatial filtering and temporal filtering. As a result, each point of an image undergoes a spatial filtering component and a temporal filtering components and these components are combined

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for each point to provide what Aufrichtig et al. identify as an "enhanced sequence." Aufrichtig et al. do not disclose, teach or suggest that filtered second image data is constructed by performing an insertion of spatially filtered image data of string points into temporally filtered data of string points. That is, each point of the filtered second image is either spatially filtered or temporally filtered as recited in claim 1, not a combination of a spatially filtered portion and a temporally filtered portion as taught in Aufrichtig et al.

Moreover, Aufrichtig et al. teach that its method "reduces filtering if an object has moved to or from a pixel" but does not state that only spatial filtering is utilized for data of string points and temporal filtering is utilized for points located outside the strings which are denoted as background points.

Zarge et al. do not close the gap between claim 1 and Aufrichtig et al.

In view of the foregoing, claim 1 is patentable over Aufrichtig et al. and Zarge et al. under 35 USC 103.

Claims 2, 3 and 8 are patentable over the cited references in view of their dependence on claim 1, and because the references do not disclose, teach or suggest each of the limitations set forth in claims 2, 3 and 8.

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Claims 9 and 11 are patentable over the cited references for reasons, inter alia, set forth above in connection with claim 1. Claim 10 is dependent on claim 9 and is patentable over the cited references in view of its dependence on claim 9.

In view of the foregoing, reconsideration and withdrawal of the rejection of claims 1-3 and 8-11 as being obvious over Aufrichtig et al. in view of Zarge et al. are respectfully requested.

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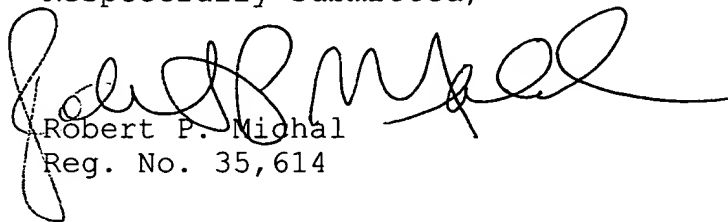
If the Examiner disagrees with any of the foregoing, it is respectfully requested to point out where there is support for a contrary view.

Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

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If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,



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